Technical progress in UK on HLA

18th AMG meeting

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RTI Lite : rational

- Long term research into distributed simulation and frameworks

- HLA and RTI seen as central to MoD's needs

- Lack of RTI implementations

    - research prototype wanted for carrying on work in causal synchrnisation

    - support for UK industrial companies without conflicts

    - STOW version available but no time management or version on Windows NT platform

RTI Lite development

- Centralised RTI
- Based around CORBA (Orbix)

    - different from 0.X series as only one object

- CORBA IDL interface with C++ veneer wrapper

- Windows NT and Solaris versions

- Used by FlasHLAmp protofeds

    - real time DIS based federates

    - causal analysis federates (C++ & SmallTalk models)

RTI Lite : Performance?

Issues raised

- **IDL specification difficult to pin down**

  - version in 1.1 inconsistent with C++

  - Having RTI executive makes join/destroy simpler

  - One ways calls to federate used rather than Cap startTick()

- **Semantics of RTI unclear**

  - used STOW RTI (and 0.33) to guess functionality

  - Usage cases important

Federation development

- Two federations - two FOMs

    - Warfighting using RPR FOM (Graham Shanks in FlasHLAmp)

    - Analysis developing own FOM - simple initially

        - (are there US equivalent programmes from ALSP?)

    - class filtering versus filter spaces

- Questions over federation initialisation

    - how to get start conditions to models from a controller

    - using interactions or ownership transfer

- Typing of RTI data

    - can typing be passed with data to identify it at runtime for loggers and analysers, etc

Federation development issues

- Time management

    - most UK companies unaware of distributed causal simulation and naive about issues like lookahead

    - Want to look at Cooperative Acceleration further to solve time creep problem

- Ownership management

    - how to manage two federates publishing different attributes of the same object.

    - Who publishes it, do you transfer parts, how can this promote reuseablity?

Future work

- **HLA Education/demonstration day**

  - possible US representative

- **RTI Lite v2 (UK-RTI)**

  - distributed version with ownership management

  - Cooperative acceleration algorithm implementation

- **Future collaboration with US**

  - Testing and HLA compliance studies

  - Possible sabbatical visitor in 97-98